

**Evidence of the anisotropically developed antiferromagnetic spin
fluctuation in CeFe₂ under high pressures**

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Itinerant electron system CeFe₂ with the lowest $T_C=230\text{K}$ and the smallest $M_S=2.3\mu_B/\text{f.u.}$ at 4.2K among C15 cubic Laves phase RFe₂ family is located near an instability of ferromagnetism. Because the Fe 3d - Fe 3d ferromagnetic exchange interaction competes with an antiferromagnetic spin correlation due to Ce 4f - Fe 3d hybridizations. Therefore, it is of interest to know how this system does behave under hydrostatic pressure. Magnetization measurements on single crystal CeFe₂ under high pressures up to 8kbar indicated that the magnetization along the each principal axis is quite anisotropically suppressed at 5K even in the cubic symmetry by applying the hydrostatic pressure. To clarify the origin of this anomalous behavior, we performed the neutron scattering experiment on single crystal CeFe₂ under pressures. The results indicate that the Fe magnetic moment becomes smaller than that in ambient pressure below $T\sim 100\text{K}$ and the antiferromagnetic spin fluctuation with a propagation vector $\mathbf{q}=(1/2, 1/2, 1/2)$ develops by applying hydrostatic pressure of 15kbar.